# Xinhang Liu



### EDUCATION

Sep. 2022 - HKUST, Hong Kong

Now PhD, Computer Science and Engineering

Sep. 2018 - ShanghaiTech University, Shanghai, China

Jun. 2022 Bachelor of Engineering, Computer Science and Technology

**GPA:** 3.85/4.0 (Major: 4.0/4.0) Ranking: 3/252

Honors: Shanghai Scholar 2021, Shanghai Outstanding Graduate 2022

### **PUBLICATIONS**

- 1 **Xinhang Liu**, Jiaben Chen, Shiu-hong Kao, Yu-Wing Tai, Chi-Keung Tang. *Deceptive-NeRF/3DGS: Diffusion-Generated Pseudo-Observations for High-Quality Sparse-View Reconstruction*. **ECCV 2024**. [pdf] [project page]
- 2 **Xinhang Liu**, Jiaben Chen, Shiu-hong Kao, Yu-Wing Tai, Chi-Keung Tang. *CryoFormer: Continuous Heterogeneous Cryo-EM Reconstruction using Transformer-based Neural Representations.* **ECCV 2024 NFBCC Workshop.** (Spotlight) [pdf] [project page] [video]
- 3 **Xinhang Liu**, Yu-Wing Tai, Chi-Keung Tang, Pedro Miraldo, Suhas Lohit and Moitreya Chatterjee. *Gear-NeRF: Free-Viewpoint Rendering and Tracking with Motion-aware Spatio-Temporal Sampling.* **CVPR 2024.** (Highlight, 2.8% of 11532) [pdf] [project page] [video] [code]
- 4 **Xinhang Liu**, Jiaben Chen, Huai Yu, Yu-Wing Tai and Chi-Keung Tang. *Unsupervised Multi-view Image Segmentation using Radiance Field Propagation*. **NeurIPS 2022**.[pdf] [project page] [code] [data]
- 5 Liao Wang, Jiakai Zhang, **Xinhang Liu**, Fuqiang Zhao, Yanshun Zhang, Yingliang Zhang, Minye Wu, Lan Xu and Jingyi Yu. *Fourier PlenOctree for Dynamic Radiance Field Rendering in Real-time*. **CVPR 2022**. [pdf] [project page] [video]
- 6 Jiakai Zhang, **Xinhang Liu**, Xinyi Ye, Fuqiang Zhao, Yanshun Zhang, Minye Wu, Yingliang Zhang, Lan Xu, Jingyi Yu. *Editable Free-viewpoint Video Using a Layered Neural Representation*. **SIGGRAPH 2021**. [pdf] [project page] [code] [video]

### **EXPERIENCES**

- Jun. 2023 Research Intern, Mitsubishi Electric Research Laboratories, with Moitreya Chatterjee, Pedro
- Sep. 2023 Miraldo and Suhas Lohit
- Mar. 2021 Robotics Institute Summer Scholar (Virtual), Carnegie Mellon University, with Prof. Sebastian
  - Jun. 2022 Scherer and Prof. Huai Yu

### **TEACHING & SERVICE**

Conference Reviewer of CVPR, ICCV, ECCV, NeurIPS, ICLR and ICML.

- Fall, 2024 COMP4411 Computer Graphics: Teaching assistant.
- Spring, 2024 COMP2611 Computer Organization: Teaching assistant.
- Spring, 2023 COMP5421 Computer Vision: Teaching assistant.
  - Fall, 2021 CS276 Computational Photography: Guest lecture in "NeRF".
  - Fall, 2021 CS182 Introduction to Machine Learning: Teaching assistant.
  - Fall, 2021 SI100B Introduction to Information Science and Technology: Teaching assistant.

## TECHNICAL SKILLS

Programming C, C++, Python (PyTorch), MATLAB, Linux,  $\LaTeX$ 

Languages Mandarin Chinese (Native), English (Fluent)

TOEFL: 107 (R:29, L:27, S:23, W:28) GRE: 325 (V: 156, Q: 169, AW: 4.0)